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ABSTRACT

This investigation utilized a recent concept developed by researchers and theoreticians studying nonverbal behavior--the contextual framework. Instruments of demonstrated reliability were employed to record simultaneous verbal and nonverbal data within the selected contextual framework of student-initiated questions. Data was collected at the University of Northern Iowa, Malcolm Price Laboratory School. The study sample included 15 teachers from grades one through twelve and 60 pupils. Pupils were placed in categories by their teachers: (1) accepting, (2) concerned, (3) indifferent, and (4) rejecting. Objectives of the investigation included: (1) to investigate physical proximity as a quantifiable dimension of nonverbal behavior; (2) to continue the exploration of the situational frame contextual approach to the study of nonverbal behavior; (3) to attempt to simultaneously record verbal and nonverbal behaviors using trained observers; (4) to validate the pupil categories that are currently being employed in investigations of teacher behavior; and (5) to examine the relationships between observed verbal and nonverbal teacher behaviors and the pupil category system developed by Silberman (1969) and used by Willis and Brophy (1974). Significant aspects of the study are that: (1) it presented an expanded view of observable teacher behavior; (2) it quantified the verbal and nonverbal behavior of teachers within the context of student-initiated questions; and (3) it appeared to validate, with additional data, the pupil category system. Six tables illustrate the data. (MM)

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A Contextual Approach to Investigating Verbal and Nonverbal Behaviors *

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Problem

Recent developments at the theoretical and methodological level suggest a solution to the point raised by Galloway (1974): "The truly difficult test is to know when an expressive cue is salient". Edney's (1974) review of human territoriality concludes that "studies that clarify this concepts relationship to adjacent concepts like privacy, interpersonal distance. . . are also called for". As regards the related topics of human territoriality and its nonverbal behavioral manifestations in interpersonal distance, Edney suggests that "no particular paradigm characterizes research on the topic, and as yet there is no standard set of principles that can be reliably applied to problems in the area". However Edney does borrow from Altman (1970) and suggests that "situational context, physical-social determinants and settings" must be appreciated in any research paradigm. The work of Hall (1972) suggests such a paradigm in the "situational frame" approach to the study of nonverbal cues. Brooks (1974) has demonstrated the utility of this approach in assessing physical proximity as a salient nonverbal behavior of teachers. This research is an extension of Hall's model to the classroom environment and responds to questions recognized by Galloway (1974).

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Procedures

The present investigation has operationalized a recent concept developed by researchers and theoreticians studying nonverbal behavior: a contextual approach to the investigation of nonverbal behavior. Instruments of demonstrated reliability have been employed to record simultaneous verbal and nonverbal data within a selected contextual frame. Specifically: (1) pupils were placed in categories labeled accepting, concerned, indifferent, and rejecting by their respective teachers; (2) the student-initiated question frame was selected as a suitable and relevant context within which to record teacher verbal and nonverbal behaviors; (3) teacher proximity within the context of the student-initiated question was the nonverbal variable of interest; (4) multiple observations were made of simultaneous verbal and nonverbal data within the selected context; (5) attitudinal data was collected which should validate the original pupil categories as well as relate to teacher verbal and nonverbal behaviors.

Objectives

Objectives include: (1) the investigation of physical proximity as a quantitiable dimension of nonverbal behavior; (2) the continued exploration of the situational frame contextual approach to the study of nonverbal behavior; (3) an attempt to simultaneously record verbal and nonverbal behaviors using trained observers; (4) the validation of pupil categories that are currently being employed in investigations of teacher behavior; (5) the examination of relationships between observed teacher verbal and nonverbal behaviors and the pupil category system developed by Silberman (1969) and currently being used by Willis and Brophy (1974).

Data Source

Data related to teacher verbal and nonverbal behavior, and pupil attitudes towards school were collected during the fall term of the 1974-75 school year. The study sample include 15 teachers from grades one through twelve and 60 pupils (4 per teacher representing the pupil categories by Silberman 1969). A total of 90 minutes of simultaneous verbal and nonverbal data were collected per pupil. Data was collected at the University of Northern Iowa, Malcolm Price Laboratory School.

Results

The following results are reported:

1) Significant differences were demonstrated ($p < .001$, 3, 248 df) between identified pupil groups on the Describe Your School Inventory. (Table I).

2) Cell means, totals and standard deviations are reported for Describe Your School Data. (Table II).

3) Verbal scores across each verbal variable are expressed within the identified pupil groups. (Table III).

4) Descriptions of verbal variables are provided. (Table IV).

5) Differences that approached significance are reported on kinesthetic data across identified pupil groups. (Table V).

6) Cell means, totals and standard deviations, for the kinesthetic data, are reported. These data are expressed in feet. (Table VI).

7) A Hoyt reliability estimate of (.86) is reported for the Describe Your School data. (Table VII).

Significance

This study: (1) presents an expanded view of observable teacher behavior, specifically teacher kinesthetic behavior; (2) quantifies the verbal and nonverbal behavior of teachers employing the Observation Schedule and Record 5V and the Proxemic Notation System within the context of student-initiated questions; (3) operationalizes the theoretical models developed by Hall (1973) and further elucidated by Edney (1974); specifically a situational contextual frame strategy for the study of nonverbal behaviors; (4) defends a contextual framework developed by Brooks (1974) within which significant differences in teacher nonverbal behavior have been demonstrated; (5) appears to validate, with attitudinal data, the pupil category system developed by Silberman (1969).

TABLE I

Analysis of Variance for Variable

Describe Your School with (N=4) Groups

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F	F Probability
Between Groups	3	1409.1875	469.7290	6.905	0.000
Within Groups	248	16871.8125	68.0315		
Total	251	18281.0000			

TABLE II

Cell Totals, Means, Standard Deviations for

Describe Your School Inventory Scores by Groups

	Cell Totals	Means	Standard Deviations
Accepted	61	39.5901	6.6292
Concerned	65	33.9385	6.7405
Indifferent	60	36.9500	7.8836
Rejected	66	33.8939	10.8559

TABLE III
Verbal Scale Scores For Selected
Pupil Categories

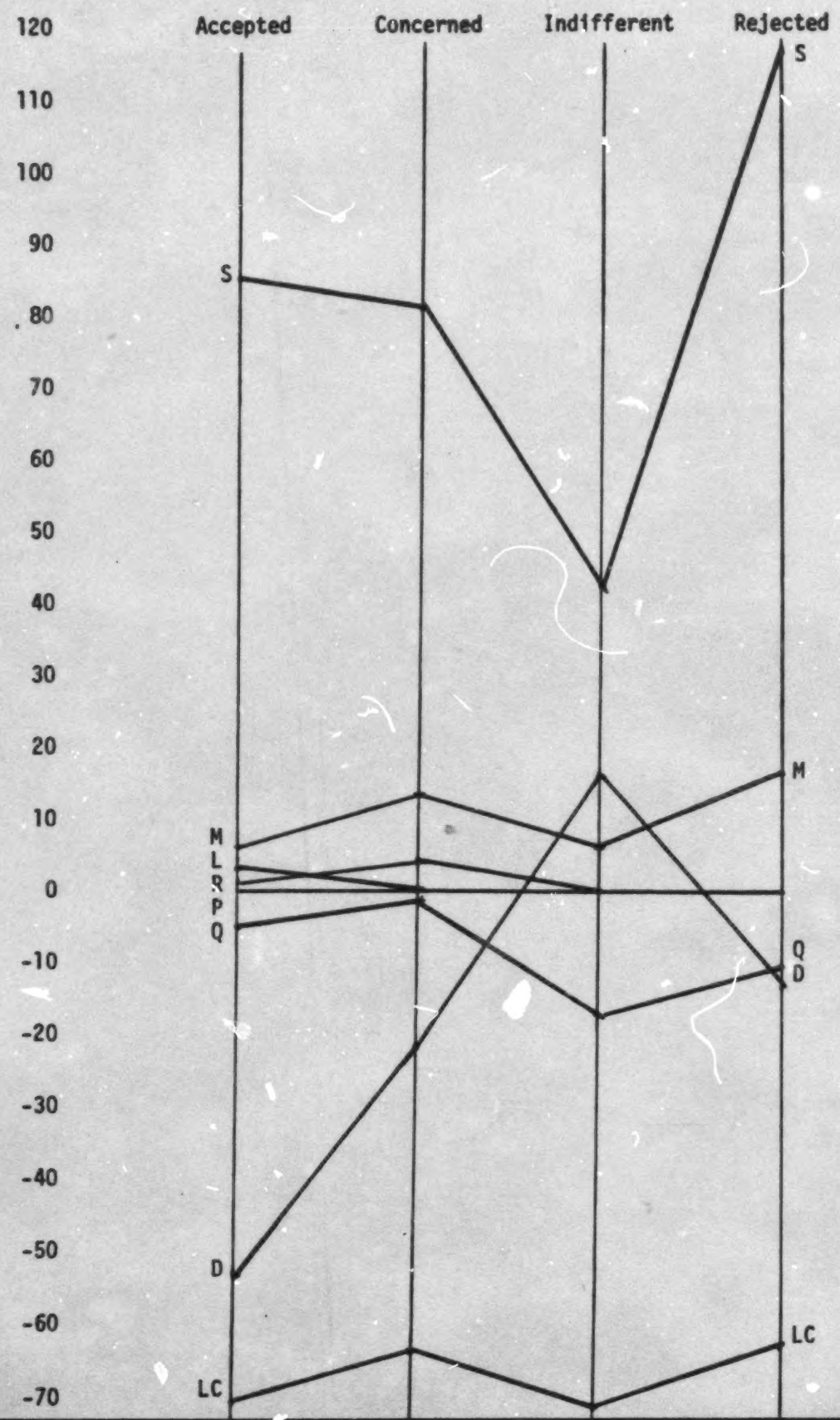

TABLE IV

DESCRIPTION OF EIGHT OBSERVATION SCHEDULE AND RECORD 5V VERBAL SCALES

M (Managing Behaviors): This is an index of the relative number of events that are concerned with procedural matters, that is with managing the class. A "really" considerate teacher would be reflected in a negative M score.

R (Rebuking Behaviors): This reflects primarily how often a teacher criticizes pupil behavior. A high score would reflect teacher irritability.

P (Permissive Behavior): A high positive score on this key reflects a permissive teacher (one who lets pupils make decisions). A high negative score reflects an autocratic teacher (one who does not let pupils make decisions).

L (Listening Behavior): A high scoring teacher is one who "listens" to a pupil and waits to be sure the pupil is done talking before replying or interrupting. This high scoring teacher lets a pupil who has just volunteered a comment or question make a second comment without interrupting him.

A (Lecturing Behavior): This key contrasts the teacher who develops content by lecturing, from one who develops it by questioning pupils. A teacher who lectures (talks about content for long periods of time) gets a very high positive score; a teacher who interacts a lot with pupils gets a high negative one.

S (Question Source): This key contrasts classrooms where pupils initiate relatively more interchanges with classrooms where the teacher initiates relatively more of them. The highest positive scores are associated with the former classrooms; a high negative score with the latter classrooms.

D (Question Difficulty): This key seems to contrast two kinds of teachers. A high positive score identifies a teacher who asks many questions, mostly convergent, which appear to be easy since the pupils almost always answer them correctly; but are rarely praised (as they should be if the questions are difficult). A high negative score identifies a teacher whose questions elicit answers of more varied quality; some are praised, some are criticized, some rejected, but very few are merely approved.

Q (Question Quality): This key contrasts two kinds of teachers. The teacher obtaining a high positive score is probing, questioning to develop more subtle points. This teacher asks mainly elaborating questions and rarely evaluates a pupil response. The teacher obtaining a high negative score asks mainly convergent questions, evaluates pupil responses, and asks another question. This later style might appear in a rapid-fire drill activity.

TABLE V

Analysis of Variance For

Kinesthetic Data with (N=4) Groups

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F Ratio	F Probability
Between Groups	3	128.5488	42.8496	2.136	0.096
Within Groups	160	3210.3948	20.0650		
Total	163	3338.9436			

TABLE VI

Cell Totals, Means, Standard Deviations

For Personal Space by Groups

Groups	Cell Totals	Means	Standard Deviations	Range Maximum	Range Minimum
Accepted	43	2.9581	2.8835	.1000	10.0000
Concerned	34	1.9547	2.1556	.1000	10.0000
Indifferent	37	2.6730	3.0103	.1000	11.0000
Rejected	50	4.3420	6.9717	.1000	46.0000

Means and Standard Deviations Expressed in Feet. $\bar{X} = 3.1098$

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